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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,636	10/24/2003	Ramon M. Navarro		7635

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William D. Breneman, Esq.
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Alexandria, VA 22305

EXAMINER

FRANTZ, JESSICA L

ART UNIT	PAPER NUMBER
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3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/691,636	Applicant(s) NAVARRO, RAMON M.	
	Examiner Jessica L. Frantz	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/22/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - On page 16, line 4 and page 19, line 14 the specification states “sanitary cleaning mechanism 110” but the reference numeral 110 does not appear in the drawings.
 - On page 17, line 17 the specification states “said sensing mechanism 60” but the reference numeral 60 was previously used to define the vessel.
 - On page 20, line 11 “includes a expandable vessel” should be changed to “includes an expandable vessel.”Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ralph 5,320,495. Ralph teaches the invention substantially as claimed including a pump delivery system comprising: a pump mechanism 14 for delivering a liquid under pressure and which generates a pulsating output during operation; and a pump

Art Unit: 3746

pulsation dampening assembly/attachment 16 for substantially reducing said pulsating output of said pump mechanism 14, said pump pulsation dampening assembly/attachment including: a pressurized vessel 16 having an interior surface defining a chamber for receiving the liquid from said pump mechanism 14 see figure 1, said chamber also containing a pocket of pressurized air located within diaphragm 28 as shown in figure 1 therein for absorbing said pulsating output generated by said pump mechanism 14; a sensing mechanism 18, 20 for monitoring the air-to-liquid ratio inside the chamber 16 in response to the duration and intensity of said pulsating fluid flow see column 4, lines 22-59, said sensing mechanism being adaptable for producing an output signal in response thereto see column 4, lines 22-59; and an adjustment mechanism 18, 20 in communication with said sensing mechanism and adapted to receive said output signal from said sensing mechanism 18, 20 and to provide an adjustment to the air-to-liquid ratio inside said chamber to a desired level in response thereto wherein said adjustment mechanism 18, 20 automatically provides an adjustment to said air-to-liquid ratio see column 4, lines 22-59. Ralph also discloses the pump pulsation dampening assembly/attachment 16 has an inlet end 24 for receiving a liquid, an outlet end 26 for dispensing the liquid, and an interior surface being the inside of the pressurized vessel 16 defining a chamber being the portion of the pressurized vessel 16 located outside of the diaphragm 28 for containing the liquid and a control end being the top portion of the pressurized vessel 16 where sensing mechanism 18, 20 is attached as shown in figure 1 for controlling the air-to-liquid ratio inside the chamber in response to the duration and intensity of said pulsating fluid flow see column 4, lines 22-59.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495. Ralph substantially teaches the invention as discussed above but fails to state the pressurized vessel 16 is sized relative to the duration and intensity level of said pulsating output. However, it has been held obvious to chose a particular material or product to suit its intended purpose see *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988) MPEP 2144.07. It has also been held obvious that "mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim..." see *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) MPEP 2144.04 IV A.

6. Claims 3, 4, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Karassik, Igor J.; Messina, Joseph P.; Cooper, Paul; Heald, Charles C. (2001). *Pump Handbook* (3rd Edition). (pp. 3.86, 3.75, 3.130, 9.193). McGraw-Hill. Ralph substantially teaches the claimed invention as discussed above but fails to teach the following claimed limitations that are taught by Karassik. Karassik teaches the use of a diaphragm pump for the purpose transferring and metering applications requiring high flow rates because they are extremely versatile being able to

Art Unit: 3746

handle a wide variety of fluids including chemicals, dry powders, food additives, glues, paints, pharmaceutical products, slurries, tailings and wastewater see Karassik pg 3.85.

Therefore, it was obvious to one of ordinary skill in the art at the time of the invention to use a diaphragm pump for the purpose of transferring and metering applications

requiring high flow rates because they are extremely versatile being able to handle a wide variety of fluids including chemicals, dry powders, food additives, glues, paints, pharmaceutical products, slurries, tailings and wastewater see Karassik pg 3.85.

Karassik further teaches the use of a positive displacement pump for applications

requiring that the flow rate is proportional to the displacement rate and independent of pressure levels see Karassik pg. 3.75. Therefore, it was obvious to one of ordinary skill

in the art at the time of the invention to use a positive displacement pump for

applications requiring that the flow rate is proportional to the displacement rate and

independent of pressure levels see Karassik pg. 3.75. Karassik further teaches the use

of a centrifugal pump in applications requiring a constant pressure at varying flow rates

to improve performance see Karassik pg. 3.130. Therefore, it was obvious to one of

ordinary skill in the art at the time of the invention to use a centrifugal pump for an

application requiring a constant pressure at varying flow rates to improve performance

see Karassik pg. 3.130. Karassik further teaches the use of a piston pump because

they can be used for very precise dosing and can handle high pressures see Karassik

pg. 9.193. Therefore, it was obvious to one of ordinary skill in the art at the time of the

invention to use a piston pump because they can be used for very precise dosing and

can handle high pressures Karassik pg. 9.193.

Art Unit: 3746

7. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Shetler, Sr. 4,304,526. Ralph substantially teaches the claimed invention as discussed above but fails to teach the following claimed limitations that are taught by Shetler. Shetler teaches the pump pulsation dampening assembly/attachment 16 as shown in figure 3 further comprises a pressure regulator 16, 19 in communication with the chamber for the purpose of insuring that water in the system is isolated from water in the pump 10 and also insures that sufficient water will remain in the outlet to prevent the pump 10 from running dry see Shetler column 4, lines 3-10. Therefore, it was obvious to one of ordinary skill in the art at the time of the invention to include a pressure regulator 16, 19 in communication with the chamber for the purpose of insuring that water in the system is isolated from water in the pump 10 and also insuring that sufficient water will remain in the outlet to prevent the pump 10 from running dry see Shetler column 4, lines 3-10.

8. Claims 9, 10, 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Brunson et al. 6,408,864. Ralph substantially teaches the claimed invention as discussed above but fails to teach the following claimed limitations that are taught by Brunson. Brunson teaches a sanitary cleaning mechanism 58, 68, 100 as shown in figure 10 for the purpose of cleaning-in-place the interior surface of said pressurized vessel 56 which comprises a conduit 58, 68 having an inlet port 58 for receiving a volume of sanitized fluid from a sanitized fluid source see Brunson column 4, lines 64-66 and an outlet port 78 disposed inside the chamber for dispensing a sanitized fluid therein to facilitate cleaning-in-place of the

interior surface of the pressurized vessel where the outlet port comprises a nozzle head 100, 102 having a plurality of apertures 102 for discharging the sanitized fluid see Brunson figure 10. Brunson teaches the use of this sanitary cleaning mechanism 58, 68, 100 for the purpose of eliminating the need for operator intervention, to provide a self-cleaning mechanism which has no special structural features requiring expensive manufacture or maintenance, and which effectively cleans all surfaces of the tank while remaining in one place and without interfering in the operation of the vessel see Brunson column 1, line 65- column 2, line 4. Therefore, it was obvious to one of ordinary skill in the art at the time of the invention to have included the sanitary cleaning mechanism 58, 68, 100 of Brunson for the purpose of eliminating the need for operator intervention, to provide a self-cleaning mechanism which has no special structural features requiring expensive manufacture or maintenance, and which effectively cleans all surfaces of the tank while remaining in one place and without interfering in the operation of the vessel see Brunson column 1, line 65- column 2, line 4.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Burke et al. 6,467,464. Ralph substantially teaches the claimed invention as discussed above but fails to teach the following claimed limitations that are taught by Burke. Burke teaches a pump pulsation dampening assembly 12 that further comprises an over-pressure relief valve 42 in communication with the pressurized vessel 12 for discharging air inside the chamber 12 when the pressure exceeds a desired level for the purpose of preventing extreme pressure conditions see Burke column 3, lines 43-48. Therefore, it was obvious to one of ordinary skill in the art at the

Art Unit: 3746

time of the invention to have incorporated an over-pressure relief valve 42 in communication with the pressurized vessel 12 for discharging air inside the chamber 12 when the pressure exceeds a desired level for the purpose of preventing extreme pressure conditions see Burke column 3, lines 43-48.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Peterson, Jr. 3,797,317. Ralph substantially teaches the claimed invention as discussed above but fails to teach the following claimed limitations that are taught by Peterson. Peterson teaches the sensing mechanism, as shown in figure 1, comprises a main body 12, 14, 16, 18 and a probe 22 extending therefrom and into said chamber 42, said probe being adaptable to monitor the air-to-liquid ratio inside said chamber for the purpose of sensing pressures inside a high pressure vessel see Peterson column 3, lines 19-30. Therefore, it was obvious to one of ordinary skill in the art at the time of the invention to have included the sensing mechanism 12, 14, 16, 18, 22 for the purpose of sensing pressures inside a high pressure vessel see Peterson column 3, lines 19-30.

11. Claims 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Miller 4,445,829 and further in view of Kuykendal et al. 2003/0000588. Ralph substantially teaches the claimed invention as discussed above but fails to teach the following claimed limitations that are taught by Miller and Kuykendal. Miller teaches the incorporation of a supplemental dampener 128, 130 in communication with chamber 126 for absorbing at least a portion of said pulsating fluid flow for the purpose of reducing peak to peak pressure variations see Miller column 11,

Art Unit: 3746

line 31-column 12, line 24. While Miller teaches the inclusion of a supplemental damper, his invention can still not be used as a pulse rate monitor because the flexible bladder 130 is located within a container 131 and can therefore not be seen in order to view pulsations. Kuykendal, however, discloses a pulsation dampener 53 which is shown in figure 5 that is not enclosed and can be used as a visual indicator to determine the pulsation rate of flow and is provided for the purpose of absorbing pump pulsations via the expansion and contraction of the bladder 53 where the bladder is composed of a deformable material with mechanical memory see Kuykendal paragraph [0035]. In regards to the method of claim 25, as discussed above the combined apparatus of Ralph, Miller and Kuykendal contain the same structure as the claimed invention and therefore, can operate in the same manner as being claimed.

Furthermore, in regards to step (b) of the method it has been held obvious to chose a particular material or product to suit its intended purpose see *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988) MPEP 2144.07. It has also been held obvious that "mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim..." see *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) MPEP 2144.04 IV A.

Therefore, it was obvious to one of ordinary skill in the art at the time of the invention to incorporate the supplemental dampeners and pulse rate monitor of Miller and Kuykendal for the purpose of reducing peak to peak pressure variations see Miller column 11 line 31-column 12, line 24 and absorbing pump pulsations via the expansion and contraction of the bladder 53 see Kuykendal paragraph [0035].

Art Unit: 3746

12. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ralph 5,320,495 in view of Miller 4,445,829 in view of Kuykendal et al. 2003/0000588 and further in view of Brunson et al. 6,408,864. Ralph, Miller and Kuykendal substantially teach the claimed invention as discussed above but fail to teach the following claimed limitations that are taught by Brunson. Brunson teaches a sanitary cleaning mechanism 58, 68, 100 as shown in figure 10 for the purpose of eliminating the need for operator intervention, to provide a self-cleaning mechanism which has no special structural features requiring expensive manufacture or maintenance, and which effectively cleans all surfaces of the tank 56 while remaining in one place and without interfering in the operation of the vessel see Brunson column 1, line 65- column 2, line 4. In regards to claim 24, Miller further discloses that the material of the bladder inside the supplemental dampener may be composed of a suitable elastic material such as rubber see Miller column 7, lines 46-51. In regards to claim 20, it would have been obvious to place the container 128 of Miller surrounding the dampener 53 of Kuykendal for the purpose of protecting the device during transportation and it is noted that all materials, when placed in the correct environment, will have some degree of expandability. In regards to claim 21, it has been held obvious to chose a particular material or product to suit its intended purpose see *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988) MPEP 2144.07. Therefore, it was obvious to one of ordinary skill in the art at the time of the invention to have included the sanitary cleaning mechanism 58, 68, 100 of Brunson for the purpose of eliminating the need for operator intervention, to provide a self-cleaning mechanism which has no special

Art Unit: 3746

structural features requiring expensive manufacture or maintenance, and which effectively cleans all surfaces of the tank while remaining in one place and without interfering in the operation of the vessel see Brunson column 1, line 65- column 2, line 4.

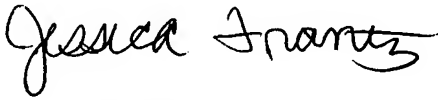
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

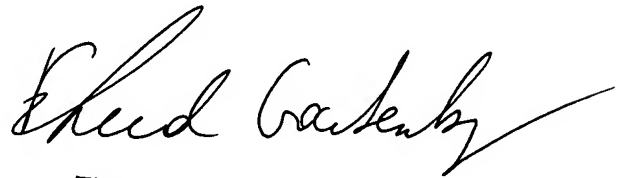
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

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JF 12/20/06



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